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DOES HAVING WOMEN ON BOARDS CREATE VALUE? THE IMPACT OF SOCIETAL PERCEPTIONS AND CORPORATE GOVERNANCE IN EMERGING MARKETS

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Many governments seek to impose gender equality on boards, but the consequences of doing so are not clear and could harm firms and economies. We shed light on this topic by conceptualizing the relationships as firm- and board-specific and embedded within specific contexts. The theory is developed with reference to emerging markets, and tested on Malaysian firms. We find that female directors create value for some firms and decrease it for others. The impact varies across different performance indicators, firms' ownership, and boards' structure. The findings call for nuanced responses in relation to women's nominations from both governments and firms. Copyright © 2014 John Wiley & Sons, Ltd.

INTRODUCTION

Government authorities around the world are adopting policies designed to increase the participation of women in firms' boards. These policies are typically underpinned by the premise that women's participation has a positive impact on the functioning of boards and subsequently on firms' performance. The theoretical and empirical evidence in support of this premise, however, is inconclusive. Some studies suggest that the diversity that women bring to boards and their distinctive management style improve boards' operation, whereas others note that the limited experience of women in leadership positions and their lesser drive to advance to the top diminish their effectiveness as board members (Dargnies, 2012). Parallel to this theoretical ambiguity, the empirical evidence on the impact of female directors on firms' performance is mixed, even in studies conducted in the same country (Adams and Ferreira, 2009; Ahern and Dittmar, 2012; Dezsö and Ross, 2012). This inconclusive state of knowledge, at a time when governments are introducing affirmative action policies that require firms to nominate women to boards, is troubling, making the understanding of the consequences of women's presence on boards timely and important.

We posit that the theoretical ambiguity and mixed findings of extant research are indicative of the complexity of the relationships between women's board participation and firms' performance that has not been fully accounted for. To comprehend

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this complexity, we develop a theory of value creation by female directors that extends existing theory in two directions. First, we assign theoretical meanings to performance indicators and conceptualize them as revealing different institutional and societal processes that determine the performance outcomes. This conceptualization provides a theoretical underpinning for the anticipation that the impact of female directors would vary across performance indicators. Second, we maintain that the processes that lead to women's nominations and determine the consequences of their presence hinge on the characteristics of firms and their boards, and hence the performance consequences of their participation on boards are firm specific (Hillman, Shropshire, and Cannella, 2007).

Our theory is developed in the context of emerging markets, and the impact of female directors on performance is conceptualized as determined by the corporate governance structure and the societal attitudes towards gender equality in these countries (Black, Jang, and Kim, 2006; Klapper and Love, 2004; Morck, 2000). We believe ours is the first study to examine—theoretically and empirically—the relationships between women's board participation and firms' performance in emerging markets.

We test the theory on a data set of 841 Malaysian firms that represent all Malaysian publicly listed firms for which data were available in 2008. The findings support the two pillars of our theory, namely, the variations in the performance consequences of female directors across different performance indicators, and the firm specificity of these relationships. These results are robust across different specifications and measures, increasing confidence in their stability. We place Malaysia in a comparative perspective with reference to culture and corporate governance structure, and use this comparative approach to illustrate the broader validity of the study. The paper concludes with a discussion of the implications of the findings for government policies and for firms deliberating nomination of women to their boards.

THEORY AND HYPOTHESES

Women's participation on boards diversifies boards' composition through the gender dimension. Their inclusion modifies the logic of the major theories that articulate the performance consequences of board structure—agency theory (Jensen and Meckling, 1976) and resource-dependency theory (Pfeffer and Salancik, 1978)—in two ways. First, women view themselves and their role in society differently than men, and behave differently as board members. Women's perceptions of themselves influence their career choices and aspirations and determine the magnitude and quality of the pool of female candidates for board nominations (Barbulescu and Bidwell, 2013). Second, firms' stakeholders perceive women differently than they perceive men and react differently to their presence on boards. This affects the demand for female directors and the corporate environment they experience as board members (Lee and James, 2007; Ryan and Haslam, 2007). These aspects determine women's participation on boards and its impact on firms' performance (Ding, Murray, and Stuart, 2013).

Both dimensions of gender impact are shaped by the institutional context in which they take place—notably, the nature of corporate governance (Aguilera and Jackson, 2003; Doidge, Karolyi, and Stulz, 2007) and culture (Hofstede, 1998). Studies show that these contextual characteristics possess significant explanatory power for variations in the gender profiles of boards across countries and for their performance consequences (Terjesen and Singh, 2008).

Our theory thus rests on the assumption that the performance consequences of women's participation on boards are inextricably embedded in an institutional context and reflect the configuration of the institutional and cultural fabric of this context. We set out to articulate the logic of this institutional embeddedness in one setting that has received limited attention by research in this area thus far—emerging markets. For the purpose of this study, we adopt an institution-based definition of emerging markets. This definition is appropriate for our study because the institutional environment is a major determinant of the relationship we study. The theory we develop is grounded in the nature of the institutional environment and cultural perceptions that prevail in these countries.

We begin by outlining a rationale for anticipating differences in the impact of female directors on performance in emerging markets, distinguishing between accounting and market performance. Extant research conducted in developed countries treated these performance indicators as different operation measures of the same theoretical

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constructs and suggested that they make little difference for the outcomes (Dalton *et al.*, 1998). We challenge this suggestion and maintain that these indicators represent theoretically different venues of value creation by female directors. Accounting performance, which reflects women's actual performance as board members, is indicative of the magnitude and quality of the pool of female candidates and the likelihood of their nominations as board members. Market performance, in turn, reveals the prevailing attitudes toward women in a society and the perceptions of their role in business.

There are several reasons for anticipating that the participation of women on boards of emerging market firms will exercise a positive impact on accounting performance. First, women's excellence in establishing relationships and in collaborative work is of high value for the group work that characterizes boards' activity (Dargnies, 2012). Women also tend to excel in monitoring activities and to hold management accountable for performance more firmly than their male counterparts (Triana, Miller, and Trzebiatowski, 2014). We suggest that these behavioral attributes are of particular value in emerging markets. Research shows that the impact of monitoring on performance is most valuable when corporate governance systems are weak or nonfunctioning (Adams and Ferreira, 2009), which is often the case in emerging markets. The absence of external mechanisms to monitor management, such as the market for corporate control, further accentuates the value of women monitoring capabilities (Morck, 2000). Studies of emerging market firms show that the presence of female directors on boards is negatively related to earnings management and accounting manipulation, and positively affects the informativeness of the reported accounting numbers (Abdullah and Ku Ismail, 2013).

Second, the career aspirations of women often result in different occupational profiles than men (Barbulescu and Bidwell, 2013), and as a result their presence on boards increases the diversity of functional background. Substantial research on developed country firms acknowledges diversity as an important determinant of boards' functioning because it connects firms to diverse external resources. Board diversity is likely to be of particular value in emerging markets, because it mirrors the high levels of diversification typical of emerging market firms. Diversified firms are subject to the demands of multiple and diverse environmental dependencies and need varied capabilities to manage them (Pfeffer and Salancik, 1978). Women directors are particularly effective in connecting firms with resources controlled by women, and in helping them attract and retain female employees (Hillman *et al.*, 2007). This is likely to be of considerable merit in emerging markets, where the gender divide often inhibits the ability of male directors to effectively connect with women.

Third, drawing on the female portion of the population, which is often excluded from the pool of candidates for board nominations, is likely to improve the quality of board members. Excluding segments of the population on discriminatory grounds is costly for firms, particularly when the excluded groups are large, as is the case for women (Ding *et al.*, 2013). The board participation of women in emerging markets is 7.4 percent, well below 11.8 percent in developed countries (GMI, 2013). It also lags far behind women's education achievements and their performance in the labor market. The potential benefits of drawing on this group are thus particularly notable in emerging markets (Siegel, Pyun, and Cheon, 2011). Formally:

Hypothesis 1: The participation of women on the boards of emerging market firms positively affects accounting performance.

There are several grounds for anticipating that the market reaction to female directors will be unfavorable, resulting in a negative impact on market performance. Most societies view women in top managerial positions unfavorably (Hofstede, 1998), and these views are pronounced in relation to board positions that are associated with power, authority, and control—attributes that are decidedly masculine. Such societal perceptions often override judgment of actual performance, leading to market reactions that bear no relation to actual performance (Lee and James, 2007). The negative views of women on boards are likely to be marked in emerging markets, shaped by deeply rooted unfavorable attitudes toward women in positions of power.

Further, the low participation of women on boards reduces and may eliminate precedents on which to evaluate the likely outcome of their presence. This increases the perceived risk associated with their nominations, which are therefore discounted by risk-averse investors (Lubomir, Moreton, and Zenger, 2012). As noted, female directors

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in emerging markets are scarcer than in developed countries (GMI, 2013), and this scarcity accentuates the risk associated with their nominations. Emerging market investors tend to be highly risk averse because investors' protection is usually weak in these countries (Morck, 2000). These investors are likely to be particularly hostile towards the presence of female directors.

A market bias against women on boards is likely also because the majority of investors are men, and they tend to have stereotypically negative perceptions of women in top managerial positions. Bigelow and Parks (2006) found that U.S. male investors are willing to invest three times more money in male-led firms than in female-led firms. The dominance of male investors that propels such attitudes is more apparent in emerging economies than elsewhere. Formally:

Hypothesis 2: The participation of women on boards of emerging market firms negatively affects market performance.

MODERATING EFFECTS: FIRM AND BOARD ATTRIBUTES

The characteristics of firms and their boards determine the likelihood of nominations of women and the criteria used in their selection. They also shape the corporate governance environment in which female directors operate and their ability to influence boards' functioning and firms' performance. Hence, the impact of female directors on accounting and market performances is likely to be contingent on the characteristics of firms and their boards (Hillman *et al.*, 2007). Notable among these characteristics are the identity of firms' owners, whether government, family, or widely held; the degree of ownership concentration; and the structure of boards. We use the term "widely held companies" to refer to companies whose controlling shares are dispersed among the public rather than held by families or the government.

There are several reasons for anticipating that the impact of female directors on accounting and market performances will be weaker in government- and family-owned firms. For one, risk-averse and conformist family- and government-owned firms are less likely to nominate women because such nominations represent a deviation from societal norms and are high-risk moves (Lubomir *et al.*, 2012). The reluctance to nominate women deprives family- and government-owned firms from the potential economic benefits of female directors (outlined in Hypothesis 1). To the extent that such firms nominate women, they exhibit preference for nominations from within their circles as a means of reducing risk. Such relationship-based nominations are accentuated in emerging markets, where business relationships are affected by personal relationships to a greater extent than in developed countries. Boards managed by large numbers of group members often pursue firm-specific agendas that deviate from shareholders' interests and are viewed unfavorably by shareholders, negatively affecting market performance. This argument may not hold when ownership is tightly concentrated such that the interests of the few large owners who nominated the boards are closely aligned.

Governments' affirmative action policies may also affect the performance impact of female directors. Government-owned firms are usually under stronger pressure to conform to these policies, resulting in a greater prevalence of female directors on their boards. The pressure on government-owned firms tends to be stronger in emerging markets where governments are usually more involved in the management of the firms they own. As evidence from Norway suggests, legislation-imposed nominations often result in nominations of lesser-qualified women, lowering the quality of female directors and diminishing their positive impact (Ahern and Dittmar, 2012). Formally:

Hypothesis 3: Compared with widely held ownership, family and government forms of ownership negatively moderate the relationships between the participation of women on boards of emerging market firms and (a) accounting performance, and (b) market performance.

The second ownership attribute that is likely to moderate the impact of female directors on performance is ownership concentration. As noted earlier (Hypothesis 1), women tend to excel in monitoring, a behavioral attribute that is likely to be valued by large shareholders whose large stake in the firm increases their incentives to monitor its activities (Shleifer and Vishny, 1986). Hence, they are likely to create an environment that is conducive for women directors to assert themselves and make an impact. Small shareholders are also

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likely to place a premium on women's monitoring skills under conditions of concentrated ownership, because they increase transparency and protect small shareholders from the large controlling shareholders who often use their power to manipulate information and diminish its availability and reliability. Studies of emerging market firms show that the concentration of ownership is significantly and positively associated with earnings management.

Furthermore, the conflict of interests between managers and shareholders typical of diffused ownership tends to be lessened and might be eliminated when ownership is concentrated. Thus, high concentration creates a corporate environment that is more conducive for women exhibiting their tendencies for consensus and conflict avoidance. The moderating impact of ownership concentration is likely to be notable in emerging markets, where the levels of ownership concentration are very high (Morck, 2000). The actual power of the large shareholders tends to be greater than their equity ownership indicates, due to the complicated pyramidal and cross-holding structures prevalent in emerging markets. Hence:

Hypothesis 4: The concentration of ownership positively moderates the relationships between the participation of women on boards of emerging market firms and (a) accounting performance, and (b) market performance.

In addition to firm ownership, the impact of female directors on performance is likely to be contingent also on boards' structure, notably the identity of its members and their independence. Of the multiple identity threats, ethnic diversity appears to be particularly impactful in the highly diverse emerging markets. Ethnicity shapes people's view of the world, including their attitudes towards gender equality, and it is likely to also affect the nomination processes of women and the nature of their board participation.

Ethnically diverse boards are more likely to create an environment in which the diversity that female directors bring is welcomed and viewed favorably. Moreover, nominations of ethnically diverse boards tend to be based on candidates' qualifications and result in a more ethnically diverse female body that mirrors the ethnic diversity of firms' stakeholders. These attributes of ethnically diverse boards are likely to accentuate the positive impact of female directors on accounting performance. Shareholders tend to believe that ethnically diverse boards are more attentive to diverse needs and better protect their interests, and hence view favorably boards' gender diversity. Formally:

Hypothesis 5: Boards' ethnic diversity positively moderates the relationships between the participation of women on boards of emerging market firms and (a) accounting performance, and (b) market performance.

We anticipate that boards' independence will also moderate the impact of female directors on performance. Free of the demands of close relationships with management, independent boards tend to monitor management closely and, in doing this, instill an environment whereby women's monitoring ability can be impactful. Independent boards are also more likely to nominate independent directors, a tendency that has a particular impact in relation to women. Research conducted in developed countries shows that the exclusion of women from the "old boy networks" often entails that they tend to be more closely aligned with the concept of independent directors (Adams and Ferreira, 2009). We believe similar patterns are likely to be apparent in emerging markets, because the wide gender divide excludes women's participation in men's networks. Shareholders value board independence because such boards better protect their rights, a feature that is of particular value when the legal protection of minority shareholders is weak or nonexistent (Morck, 2000). Formally:

Hypothesis 6: Boards' independence positively moderates the relationships between the participation of women on boards of emerging market firms and (a) accounting performance, and (b) market performance.

METHOD

The empirical testing is based on a dataset of 841 firms listed on the Main Board in Bursa Malaysia for which data were available in 2008 (Appendix A, File S1). Malaysia provides an interesting context for our study. It is notable among emerging countries in its commitment to promote

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women in business, including on boards, and has made considerable strides in advancing women. As part of these gender promotion initiatives, the Malaysian government issued strong recommendations to Malaysian firms to appoint 30 percent women at the decision-making levels, the first Asian government to do so, pioneering among emerging markets. Malaysia thus provides a rich context for the study of the performance consequences of female directors in emerging markets. Further, Malaysia represents a corporate governance context that is common in several emerging markets, but is somewhat unusual in a global perspective. This provides a distinct context for our study, and affords the opportunity for theoretical extensions. Lastly, Malaysia is interesting also in relation to gender equality. It is notable in its institutional commitment to gender equality and the advancement of women, and at the same time deeply rooted cultural resistance to women's progression. This combination provides an interesting setting for observing the interplay between societal and institutional attributes in affecting the relationships we study. Appendices B and C in File S1 present Malaysia in a comparative perspective in relation to governance structure and gender equality and illustrate these features.

Data for the empirical analyses were collected from firms' annual reports, supplemented by DataStream (for the performance indicators) and Bursa Malaysia. Table 1 presents the variables in the model, their operation measures, descriptive statistics, and Pearson coefficients.

Endogeneity might drive the relationships between performance and women's nominations, and that would violate the causal relationships we assume between them. We recognize this issue, but believe that our study design and data reduce endogeneity concerns and hence do not correct for it in the analysis. Our measure of the presence of women on boards represents cumulative nominations over time, whereas the performance indicators are at one point in time. This introduces a time lag between women's appointment and firms' performance and removes the potential for reverse causality. Furthermore, the empirical evidence in support of endogeneity between performance and women's presence on boards is mixed and inconclusive. The stability of our results across different estimates (reported in the next section) is also reassuring of the causality direction we assume.

We also note some theoretical reasons for assuming that, in the context we study, the prevalence of female directors is exogenous to performance. The legitimacy effect that board nominations of women is maintained to provide in the United States (Adams and Ferreira, 2009; Hillman *et al.*, 2007) does not seem to hold in emerging markets. Asian firms refrain from publicizing their women nominations to avoid alienating their stakeholders (Siegel *et al.*, 2011). In addition, firms' tendency to engage female directors who are family members or associated with the government, common in emerging markets and Malaysia, is driven by the intention to protect the interests of the controlling owners. These concerns override performance considerations and deter the association between the two. Almost half of the female directors of the firms we studied have family relationships with board members (Appendix D, File S1).

RESULTS AND DISCUSSION

The hypotheses are tested based on an ordinary least squares multiple regression with a hierarchical modeling procedure (Table 2). The findings show that, before accounting for the moderating effects, Malaysian firms that have at least one woman on their boards have higher return on assets (ROA) and lower Tobin's q than those that have none. Both effects are statistically significant, in support of Hypotheses 1 and 2. These findings suggest that female directors create economic value, but the market discounts their impact.

The conflicting results for the two performance indicators are informative of the different ways by which societal attitudes towards women affect the relationships we study, and provide support for the varying connotations we assign for different performance measures.

The positive results for Hypothesis 1 are indicative of the benefits accrued to firms recruiting Malaysia's large pool of underutilized female candidates. The majority of students in Malaysia universities are women; yet, more than half of the firms we studied did not have any women on their boards, and one-third had only one woman (Appendix E, File S1). The negative impact of female directors in the Tobin's q analysis (Hypothesis 2) is indicative of the unfavorable views of women in positions of power common in Malaysia.

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Table 1. The variables in the model

Constructs	Operation measures	Mean (*SD*)	Max.	Min.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Accounting performance	ROA[a]	0.02 (0.13)	0.74	−1.77													
2. Market performance	Tobin's q[a]	1.00 (0.92)	11.96	0.12	0.15**												
3. Women on boards	0/1 (at least one woman)	0.56 (0.75)	1	0	0.08**	−0.07*											
Moderating effects																	
4. Board ethnic diversity	Simpson diversity index[b]	0.38 (0.18)	0.76	0	−0.00	0.00	0.00										
5. Board independence	0/1 (median score)	0.45 (0.13)	1	0	−0.15**	0.01	−0.10**	0.01									
6. Government ownership	0/1 (20% ownership)	0.06 (0.24)	1	0	0.05	0.08**	0.06*	−0.11**	0.06*								
7. Family ownership	0/1 (20% ownership)	0.23 (0.42)	1	0	0.04	−0.11**	0.12**	−0.06*	−0.14**	−0.14**							
8. Ownership concentration	Proportion owned by largest five shareholders	0.54 (0.17)	0.97	0.05	0.22**	0.02	0.03	−0.02	−0.03	0.23**	−0.02						
Control variables																	
9. Board size	Number of directors	7.40 (1.89)	17	2	0.20**	0.08**	0.14**	0.07*	−0.27**	0.13**	0.07*	0.12**					
10. Firm size	Total assets millions RM (log)	2,694 (15,390)	267,883	1.16	0.15**	0.13**	0.02	0.11**	0.00	0.31**	−0.02	0.16**	0.35**				
11. Board age	Average age of directors	55.19 (5.03)	73.4	34.8	0.10**	−0.01	−0.11**	0.11**	0.10**	0.13**	0.07*	0.11**	0.08**	0.31**			
12. Chinese directors	Proportion of Malaysian Chinese directors	0.54 (0.29)	1	0	0.05	−0.13**	0.07*	−0.20**	−0.18**	−0.33**	0.21**	−0.23**	−0.05	−0.29**	−0.19**		
13. Nonexecutive directorship[b]	Proportion of nonexecutive directors	0.64 (0.17)	1	0.22	−0.04	0.08**	−0.07*	0.09**	0.36**	0.22**	−0.23**	0.20**	−0.09**	0.20**	0.24**	−0.43**	
14. Audit committee size[b]	Number of audit committee members	3.26 (0.62)	9	2	0.12**	0.07*	0.04	0.04	0.19**	0.11**	−0.03	0.13**	0.34**	0.19**	0.16**	−0.17**	0.14**

[a] Normalized using the Van der Waerden formula.
[b] The Simpson diversity index is defined as $D = 1 - \sum_{i=1}^{N} p_i^2$ where p represents the proportion of individuals in category i, and N is the number of categories. A diversity score equal to 0 means that all directors are of the same ethnic group.
[c] Dropped from the analyses due to high multicollinearity (variance inflation factor >10).
$^{**}p < 0.01$; $^{*}p < 0.05$ (two-tailed)
$N = 841$.
Descriptive statistics and correlation coefficients of the industry dummies are available from the authors upon request.
Notes: $N = 841$. Descriptive statistics and correlation coefficients of the industry dummies are available from the authors upon request.

Table 2. Model estimates: regression coefficients (t−values)

	ROA				Tobin's q			
Dependent variable	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4
Women (0/1) [H1, H2]		0.16	0.15	−0.24		−0.15	−0.13	0.05
		(2.42)**	(2.27)**	(−0.85)		(−2.18)**	(−1.94)*	(0.18)
Ownership: family			−0.12	0.001			−0.17	−0.10
			(−0.23)	(0.01)			(−2.13)**	(−0.87)
Ownership: government			−0.19	0.16			0.03	0.30
			(−1.26)	(0.30)			(0.19)	(1.40)
Ownership concentration			0.01	0.01			0.004	0.004
			(5.36)***	(3.01)***			(1.75)*	(1.42)
Board ethnic diversity			−0.08	−0.03			0.02	0.07
			(−0.42)	(−0.16)			(0.11)	(0.29)
Board independence			−0.14**	−0.20**			0.001	0.09
			(−2.15)	(−2.39)			(0.01)	(1.00)
Women × family [H3]				−0.04				−0.16
				(−0.24)				(−0.98)
Women × government [H3]				−0.52				−0.49
				(−1.82)*				(−1.68)*
Women × ownership concentration [H4]				0.01				0.000
				(1.80)*				(−0.07)
Women × board ethnic [H5]				−0.07				−0.04
				(−0.19)				(−0.11)
Women × board independence [H6]				0.15				−0.20
				(1.14)				(−1.48)
Board size	0.08	0.08	0.06	0.06	0.02	0.03	0.03	0.03
	(4.44)***	(4.05)***	(3.45)***	(3.29)***	(1.18)	(1.49)	(1.49)	(1.57)
Firm size	0.10	0.10	0.09	0.10	0.06	0.06	0.05	0.06
	(3.66)***	(3.71)***	(3.29)***	(3.50)***	(2.34)**	(2.31)**	(1.90)*	(2.13)**
Board age	0.01	0.01	0.01	0.01	−0.01	−0.02**	−0.01	−0.01
	(0.99)	(1.26)	(1.26)	(1.07)	(−1.90)*	(−2.14)	(−2.04)**	(−1.94)*
Finance	−0.47	−0.50	−0.44	−0.48	0.71	0.74	0.70	0.70
	(−2.14)**	(−2.27)**	(−2.01)**	(−2.18)**	(3.19)***	(3.31)***	(3.18)***	(3.09)***
Industrial products	0.20	0.19	0.20	0.17	−0.04	−0.04	−0.03	0.03
	(1.20)	(1.16)	(1.23)	(1.04)	(−0.27)	(−0.22)	(−0.17)	(−0.19)
Consumer products	0.41	0.40	0.36	0.34	0.21	0.22	0.22	0.23
	(2.39)**	(2.33)**	(2.11)**	(1.98)**	(1.23)	(1.29)	(1.28)	(1.33)
Trade and services	0.21	0.21	0.25	0.22	0.34	0.35	0.34	0.34
	(1.29)	(1.23)	(1.53)	(1.32)	(2.03)**	(2.09)***	(2.02)**	(1.98)**
Property	−0.01	−0.04	0.01	−0.02	−0.43	−0.40	−0.38	−0.40
	(−0.06)	(−0.22)	(0.05)	(−0.11)	(−2.37)**	(−2.23)**	(−2.07)**	(−2.20)**
Construction	−0.23	−0.22	−0.21	−0.23	0.40	0.39	0.42	0.42
	(−1.14)	(−1.10)	(−1.09)	(−1.17)	(2.00)**	(1.97)**	(2.12)**	(2.10)**
Plantation	0.86	0.87	0.87	0.86	0.29	0.28	0.31	0.29
	(4.09)***	(4.15)***	(4.20)***	(4.15)***	(1.37)	(1.32)	(1.44)	(1.34)
Constant	−2.42	−2.55	−2.82	−2.63	−0.367	−0.25	−0.33	−0.46
	(−5.30)***	(−5.56)***	(−6.04)***	(−5.45)***	(−0.80)	(−0.54)	(−0.70)	(−0.93)
Adjusted R^2	0.10	0.11	0.14	0.14	0.09	0.09	0.10	0.10
F-statistic	10.73***	10.34***	9.56***	7.59***	9.02***	8.67***	6.51***	5.27***
N[a]	841	841	841	841	840	840	840	840

[a] The Tobin's q analyses have one less firm because market capitalization was not available for one firm.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.0$

The significant results of Hypotheses 1 and 2 should be evaluated in light of the small numbers of women on the boards of Malaysian firms (Appendix E, File S1). Research suggests that the number of female directors has to reach a tipping point, identified to lie between 10 and 30 percent of directors, in order for it to be noticeable (Kogut, Colomer, and Belinky, 2014; Konrad, Kramer, and Erkut, 2008). Only a few of the firms we studied pass these thresholds (Appendix E, File S1). It could be that in a society that discriminates against women in leadership positions, the women that reach the top are particularly able, and their presence on boards has a significant impact, even when in small numbers. Studies of developed countries find that board participation requires women to be more accomplished than men, to compensate for gender bias in board nominations. It is likely that such a gender effect is pronounced in a country like Malaysia. Indeed, at the time of our study, more than half of the female directors in Malaysia held university degrees, and 15 percent of them held graduate degrees (Appendix D, File S1).

The impact of women on both performance measures turns insignificant with the introduction of the moderating variables, which suggests that this impact is captured via these moderating effects, in support of the firm specificity of the relationships. The impact of female directors on performance is significantly moderated by firms' ownership characteristics, whereas the characteristics of the boards do not influence these relationships.

Government ownership is significant with both performance measures and in the anticipated negative direction (Hypothesis 3a, b), in agreement with our theory. Family ownership is insignificant in either analysis, perhaps reflecting similarity between Malaysia's family-owned and widely held firms. Both groups of firms are owned and managed by the Malaysian Chinese and share many common characteristics. The moderating effect of ownership concentration is positive and significant in the ROA analysis, and insignificant in the Tobin's q analysis. The nonsignificant results might be interpreted as suggesting that Malaysia shareholders believe that, under conditions of concentrated ownership, women are nominated to boards because they are less powerful and less able to exert control over the large, powerful shareholders. Hence, the market interprets their presence as lacking significance, in agreement with our findings.

A possible explanation for the insignificance of ethnic diversity could be the ethnic homogeneity of the boards of many Malaysian firms. The high ethnic diversity that characterizes Malaysia is not mirrored in the governance structure of Malaysian firms. Government-owned firms are for the most part governed by the Malaysian Malays, and other firms are controlled and managed mostly by the Malaysian Chinese. In part, this is a result of an affirmative action policy pursued by the Malaysian government to ensure the representation of the Malay community in the business sector.

The insignificance of the moderating effect of board independence on either performance indicator might be due to the fact that in Malaysia, as in many other emerging markets, independent directorship is a concept deprived of its actual meaning. Firms nominate directors that fulfill the legal definition of independence but are close to the management and act in the interest of the controlling shareholders. Nor are such independent boards more likely to nominate female directors as our theory suggests (Abdullah, 2014).

It might also be that the nonsignificance of board characteristics is revealing of some interactions between boards' and firms' characteristics, such that their moderating effects are exercised jointly. Testing of the combined effect of firms' ownership and board structure provided support for this suggestion, indicating that the moderating effects of firms' ownership and the ethnic diversity of their boards are exercised together. The results of these analyses are available from the authors upon request. We conducted several additional tests to examine the robustness of our conclusions to different measures and specifications (see Appendix F, File S1 for the results and discussion). There are minor changes in the magnitude of some coefficients but the general conclusions continue to hold in these modified specifications. The comparative data in Appendices B and C, File S1 enable us to evaluate our findings in broader perspective and examine their validity beyond Malaysia. Limitations of the study and suggestions for future research are discussed in Appendix G, File S1.

CONCLUSIONS

In this study, we sought to deepen the understanding of the impact of female directors on firms' performance. Our findings make three important contributions to the theory on the performance consequences of female directors on boards. For

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one, they show that this impact manifests in conflicting directions, positively affecting accounting performance and negatively influencing market performance. This suggests that female directors are subject to a biased evaluation by the market, which undervalues their presence on boards. The conflicting results of the two performance indicators speak for the importance of assigning theoretical meanings to performance indicators and treating them as indicative of different contextual characteristics that affect outcomes in different ways.

The variations we find in the impact of female directors on performance across firms with different ownership types and structures is another important contribution of the study, which serves to deepen the understanding of the firm-specificity of the relationships and to identify some of the salient moderating effects. The significant results show that the performance consequences of female directors cannot be understood without accounting for the contingency effects that shape them.

Lastly, the study advances the understanding of the impact of female directors in emerging markets, extending our knowledge of the institutional and cultural characteristics that shape this outcome. The focus on a single emerging economy enables us to ground the major theoretical constructs that shape the relationships of interest within a context and conceptualize them as socially constructed and context specific. In doing this, we offer a theoretical underpinning for the anticipation of the impact of institutional and societal dimensions on the outcome, and suggest that the performance impact of female directors is likely to be contingent on these dimensions (Aguilera and Jackson, 2003; Doidge *et al.*, 2007). The study of the performance consequences of gender diversity of boards, as one dimension of boards' structure, in emerging markets is of notable merit. The weak institutional environment typical of these countries and the absence of external mechanisms of corporate control of the type common in developed countries heighten the value of the internal control function exercised by boards. These institutional circumstances also foster considerable variations in governance practices, turning them into an important determinant of firms' performance and market value.

The study offers several important lessons for practice. The conflicting impact of female directors on accounting and market performances provides support for women's board nominations but also suggests that the response of the market could hinder the benefits associated with their participation. Government policies should be formed with recognition of this trade-off. Firms considering the nominations of women to their boards should also be aware of it. The firm specificity of the relationships calls for nuanced responses to women's board nominations from firms and policymakers. Gender quotas imposed equally might benefit some firms but could be inappropriate for others. Firms considering the nominations of women should carefully examine the level of women's involvement that is adequate for them.

Further, our theory and interpretation of the findings suggest that context plays a role in shaping the impact of female directors on performance. This suggestion, which has to be verified in a multicountry study, indicates that the desired level of gender equality on boards might be country specific. Introducing affirmative action policies based on experiences of other countries, as some governments do, could be inappropriate. Firms should also consider the value of female directors with reference to the characteristics of the context in which they operate.

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REFERENCES

Abdullah SN. 2014. The causes of gender diversity in Malaysian large firms. *Journal of Management and Governance* **18**(4): 1137–1159.

Abdullah SN, Ku Ismail KNI. 2013. Gender, ethnic and age diversity and performance of large Malaysian firms. *Jurnal Pengurusan* **38**: 27–40.

Adams RB, Ferreira D. 2009. Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics* **94**: 291–309.

Aguilera RV, Jackson G. 2003. The cross-national diversity of corporate governance: dimensions and determinants. *Academy of Management Review* **28**(3): 447–465.

DOI: 10.1002/smj

Ahern KR, Dittmar AK. 2012. The changing of the boards: the impact on firm valuation of mandated female board representation. *Quarterly Journal of Economics* **127**(1): 137–197.

Barbulescu R, Bidwell M. 2013. Do women choose different jobs from men? Mechanisms of application segregation in the market for managerial workers. *Organization Science* **24**: 737–756.

Bigelow L, Parks JM. 2006. Gender stereotypes hold back investors. PostGazzette.com. 21 March.

Black B, Jang H, Kim W. 2006. Predicting firms' corporate governance choices: evidence from Korea. *Journal of Corporate Finance* **12**: 660–691.

Dalton DR, Daily CM, Ellstrand AE, Johnson JL. 1998. Board composition, leadership structure, and financial performance: meta-analytic reviews and research agenda. *Strategic Management Journal* **19**: 269–290.

Dargnies MP. 2012. Men too sometimes shy away from competition: the case of team competition. *Management Science* **58**: 1982–2000.

Dezsö CL, Ross DG. 2012. Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal* **33**(9): 1072–1089.

Ding WW, Murray F, Stuart TE. 2013. From bench to board: gender differences in university scientists' participation in corporate scientific advisory boards. *Academy of Management Journal* **56**(5): 1443–1464.

Doidge C, Karolyi A, Stulz RM. 2007. Why do countries matter so much for corporate governance? *Journal of Financial Economics* **86**(1): 1–39.

GMI. 2013. *GMI Ratings' 2013 Women on Boards Survey*. GMI Ratings: New York.

Hillman AJ, Shropshire C, Cannella AA. 2007. Organizational predictors of women on corporate boards. *Academy of Management Journal* **50**(4): 941–952.

Hofstede G. 1998. *Masculinity and Femininity: The Taboo Dimension of National Culture*. Sage: Thousand Oaks, CA.

Jensen MC, Meckling WH. 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* **3**(4): 305–360.

Klapper LF, Love I. 2004. Corporate governance, investor protection and performance in emerging markets. *Journal of Corporate Finance* **10**: 703–728.

Kogut B, Colomer J, Belinky M. 2014. Structural equality at the top of the corporation: mandated quotas for women directors. *Strategic Management Journal* **35**(6): 891–902.

Konrad AM, Kramer VW, Erkut S. 2008. Critical mass: the impact of three or more women on corporate boards. *Organizational Dynamics* **37**(2): 145–164.

Lee PM, James EH. 2007. She'-E-Os: gender effects and investor reactions to the announcements of top executive appointments. *Strategic Management Journal* **28**(3): 227–241.

Lubomir PL, Moreton P, Zenger TR. 2012. Corporate strategy, analyst coverage, and the uniqueness paradox. *Management Science* **58**: 1797–1815.

Morck RK (ed). 2000. *Concentrated Corporate Ownership*. University of Chicago Press: Chicago, IL.

Pfeffer J, Salancik GR. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. Harper and Row: New York.

Ryan MK, Haslam SA. 2007. The glass cliff: exploring the dynamics surrounding women's appointment to precarious leadership positions. *Academy of Management Review* **32**: 549–572.

Shleifer A, Vishny RW. 1986. Large shareholders and corporate control. *Journal of Political Economy* **94**: 461–488.

Siegel J, Pyun L, Cheon BY. 2011. Multinational firms, labor market discrimination, and the capture of competitive advantage by exploiting the social divide. Harvard Business School Working paper 11-011, Harvard Business School, Boston, MA.

Terjesen S, Singh V. 2008. Female presence on corporate boards: a multi-country study of environmental context. *Journal of Business Ethics* **83**(1): 55–63.

Triana M, Miller T, Trzebiatowski T. 2014. The double-edged nature of board gender diversity: diversity, firm performance, and the power of women directors as predictors of strategic change. *Organization Science* **25**(2): 609–632.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

File S1: Appendices.

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